

In sum, SBC firmly believes that the FCC got it right the first time -- no switch or other switching equipment is required by the 1996 Act to be collocated. Nothing has changed which supports or justifies a change of the Commission's earlier conclusion.

2. Complying with Safety Requirements and Standards Is Inherently Reasonable and Imminently Negotiable

SBC wholeheartedly supports the tentative conclusion that ILECs may require a carrier's equipment to comply with safety requirements and standards. NPRM, ¶ 134. SBC is unaware of any dispute on that issue that warrants rulemaking, however. Indeed, with a few exceptions, requesting carriers have been willing to readily agree in negotiated agreements with the SBC ILECs to abide by the Bellcore Network Equipment and Building Specifications ("NEBS") standard. To the extent that the Commission determines that a rule is absolutely necessary to address this issue, SBC would support such a rule. The Commission should not, however, establish NEBS or a similar standard as the standard ILECs and CLECs must follow.

With respect to the ancillary proposal to address potential situations where an ILEC may use non-NEBS compliant equipment, the Commission should be careful not to adopt an inflexible rule that does not recognize differences between premises and/or the safety precautions that may be used. For example, non-NEBS equipment may be deployed and permitted in one central office but not another due to differences between building specifications or configurations. Non-NEBS equipment may be permitted in one type of premises, but not another due to the sensitivity of the other equipment in the latter. Non-NEBS equipment may be deployed in only one part of a central office due to safety precautions (e.g., firewalls). The SBC

LECs have been willing to accord equivalent treatment of a carrier's non-NEBS equipment that meets the section 251(c)(6) standard. However, such treatment does not equate to a rule that results in a single deployment by an ILEC of non-NEBS compliant equipment in a single premises under controlled conditions permitting a requesting carrier to place the same or equivalent equipment any place in any premises without conditions. This is another area where rulemaking may do more mischief than good.

3. Keeping Equipment Lists Would Be Unreasonable and Impractical

However, in no event should the FCC adopt a requirement that an ILEC "list all approved equipment and all equipment they use." NPRM, ¶ 134. Given the context of this proposal, SBC reads it as only speaking to non-NEBS equipment (or whatever standard used by the ILEC), and not speaking to all equipment -- standard-compliant and non-standard. The Commission should clarify its proposal accordingly.

In any event, SBC has no idea how it could ensure compliance with any such rule, no matter how many people-hours were spent trying to find, inventory, and list every piece of equipment used, and thereafter to keep such a list current through additions and deletions. For the reasons described above, the list would have to be ILEC premises-specific to reflect the fact that one piece of equipment might be allowed one place, but not another. The cost of such an effort would undoubtedly be significant. Such a list would also disclose information that SBC considers proprietary, and might also be construed as tacit endorsement of the equipment. Any rules should not require public disclosure, and should permit ILECs to require non-disclosure

agreements with receiving CLECs. Such a rule will merely invite complaints without achieving the goal apparently sought by requesting carriers.

A more measured targeted response would be to encourage negotiations on non-standard equipment in the context of disclosure by the ILEC of its non-standard compliant equipment in a specific premises in response to a CLEC's collocation application that includes the proposed placement of non-standard equipment.

4. Different Forms of Collocation Are Better Left for Negotiation, Rather than Commission Rule

A prime example of why the FCC should promulgate few rules in this proceeding is its tentative conclusion to adopt a rule that requires ILECs to provide (i) "common area" collocation, (ii) physical collocation with no minimum space requirement, and (iii) "cageless" collocation. The SBC LECs firmly believe that these issues are being more than adequately addressed by negotiations and State commissions in the context of specific demands from CLECs and specific objections or concerns by the ILEC.¹² Indeed, the SBC LECs have already agreed to provide the first two forms of collocation, but continues to have grave concerns about "cageless" collocation. That being said, the SBC LECs' experience has been that no carriers have pursued "common cage" collocation apparently due at least in part to security concerns.

"Common Area" Collocation: Since its first collocation negotiations under the 1996 Act, SWBT has been willing to provide "common area" collocation. However, SWBT had doubts at

¹² For example, an ILEC's security concerns and measures can vary from ILEC premise-to-premise, depending on geographic location, potential extent of service degradation, and the sensitivity of the equipment placed in a specific premises.

that time that CLECs would be willing to share space, and accordingly sought assurances of cost recovery from the initial requesting CLEC. The requesting CLEC dropped the request, thereby setting a pattern that has continued to this day. The most recent example occurred in Pacific's section 271 collaborative workshops in California. To address the collocation complaints of various CLECs, Pacific offered to provide "common area" collocation and received a less-than-enthusiastic response. At most, two CLECs indicated an interest in this type of arrangement.¹³ The two largest carriers -- AT&T and MCI (now part of WorldCom) -- have consistently shown no interest in this type of arrangement.

"Common area" collocation may sound like a solution in the abstract, but none of the SBC LECs provides such an arrangement more than two years after the 1996 Act. No matter; the SBC LECs have been and are willing to offer "common area" collocation subject to cost recovery assurances (*e.g.*, what if the requesting, "first-in" CLEC is the only CLEC that uses the space) and adequate liability limitation and indemnity provisions to address actions of third parties in the "common area." But particularly in light of the lack of any actual demand, SBC believes that the negotiation/arbitration process is more than adequate to address "common area" collocation requests, and that rulemaking is simply unnecessary and unwarranted.

Physical Collocation Space of Less than 100 Square Feet: This is another area where the SBC LECs are willing to accommodate the requests of CLECs. Typically, CLECs want more

¹³ As an alternative, the CLECs could share a single cage of, for example, 100 square feet by having one CLEC obtain the space and then "sublease" space. CLECs are then responsible for addressing security concerns amongst themselves. Subject to certain minimal conditions, the SBC LECs have been willing to permit those arrangements as well.

space than 100 square feet, rather than less. If a CLEC is willing to accept less than 100 square feet, whether due to its own limited needs or ILEC space restrictions, the SBC LECs have no objection to providing such a secured space. In fact, Pacific has offered such non-standard space to CLECs, who have accepted the arrangement.

The Commission should recognize, however, that there may be tradeoffs associated with a space of less than 100 square feet. For example, depending upon the particular premises in question, the cost of preparing 50 square feet may not be significantly different as compared to 100 square feet. Many of the non-recurring costs associated with physical collocation may not vary with smaller spaces, *e.g.*, cable racking, conduit, space preparation. Similarly, the monthly charge for floor space is a relatively insignificant amount of the total monthly charges; the greater proportion does not vary with cage size, *e.g.*, power, conduit.

Again, however, this is an area where rulemaking seems unnecessary to address an issue that lends itself to resolution in negotiations and, as appropriate, arbitration or complaint.

"Cageless" Collocation: SBC believes "cageless" collocation raises an unacceptably high risk of harm to an ILEC's network and services, as well as raises proprietary concerns. The SBC LECs will not voluntarily jeopardize its network or its customers' services by allowing CLECs to roam outside a secured path and a cage, or a partitioned area. The prospect of future outages of FCC-reportable magnitude caused by unauthorized persons is a significant concern to SBC. The potential for harm to an ILEC's network or another carrier's network is far too great to embrace cageless collocation.

These security concerns are not illusory, and have resulted in the earlier rejection of "cageless" collocation by the Commission. In the Interconnection Order, the Commission recognized the legitimate security and competitive concerns of incumbent LECs:

Based upon on comments in this proceeding and our previous experience with physical collocation in the *Expanded Interconnection* docket, we will continue to permit LECs to require reasonable security arrangements to separate an entrant's collocation space from the incumbent LEC's facilities. The physical security arrangements around the collocation space protect both the LEC's and competitor's equipment from interference from unauthorized parties. We reject the suggestion of ALTS and MCI that security measures be provided only at the request of an entrant since LECs have legitimate security concerns about having competitors' personnel on their premises as well.

Interconnection Order, ¶ 598 (italics in original). There has been no change in circumstance or experience that in any way justifies a change in the FCC's decision. The legitimate security and competitive concerns remain and, indeed, are heightened as the intensity of competition increases and the number of collocators grows.

ILECs are not the only carriers concerned with security. Echoing the actual experience with "common area" collocation, negotiations with other carriers have consistently revealed that many if not all are just as concerned about access that non-authorized personnel could have to their collocated equipment. That concern has extended to ILEC personnel, and has led to negotiations to narrow the circumstances under which ILEC personnel and even insurance inspectors are permitted to access a CLEC's collocation cage. Some CLECs have actually requested a higher level of security than offered by SBC, and have interconnection contracts with

SBC LECs that require compliance with the CLEC's practices upon request. A cageless environment does nothing but reduce the level of security for both SBC and CLECs alike.

Security concerns are especially acute when the United States government requires additional network security due to external events that heighten national security concerns. For example, during the Persian Gulf war and the recent cruise missile attacks against the Sudan and Afghanistan, the United States government restricted all work on the key components of Pacific's network in order to maximize network reliability and availability. SWBT has had work restrictions in place during the Gulf War, and during space shuttle missions. Insofar as SBC is aware, the various governmental agencies involved (e.g., National Communications Agency, Federal Emergency Management Agency, the National Security Emergency Preparedness group of the National Telecommunications Alliance that interfaces with federal agencies) do not have a method in place to inform the CLECs of the temporary restrictions, and SBC does not have a means to ensure that the CLECs would adhere to them in a cageless environment. Indeed, SWBT recently experienced an incident in which a CLEC allowed an unauthorized person into that CLEC's collocation cage. Since the cage was secure from SWBT's equipment and that of other CLECs, the effects of the security breach was somewhat limited. In a cageless collocation environment, however, there would have been no constraints on the possible impacts of such security breaches and the SBC LECs would possess a substantially diminished ability to enforce heightened security in such emergency situations.

The current security measures employed in central offices by the SBC LECs (*e.g.*, caged space, secured passageways, card readers) maintain the integrity and reliability of its network and those of others. With one exception to date, SBC has been able to provide a secured path for collocators to use to access their cages that permit them to come and go as they please, 24 hours a day, 7 days a week. Those measures have been judged reasonable and approved by both the FCC and the relevant State commissions. Under the circumstances, there is absolutely no basis for changing the FCC's earlier decisions or upsetting those State determinations.

Moreover, SBC is unaware of any adequate substitute for the use of cages and secured pathways. The state of technology certainly cannot provide for a proper level of security with cageless collocation. Neither cameras nor computerized access systems would be sufficient inasmuch as they are generally limited to determining where a person is, not what a person is doing. Specifically, a camera could likely be used to require a "snapshot" of each person entering the premises, but could not tell more than that. Other cameras, whether hidden or apparent, could be positioned throughout the premises to record traffic within the building, but would not be able to identify with certainty a particular person and what that person is doing. Real-time monitoring of the cameras is no answer either. While such monitoring might be able to more quickly identify obvious incidents and those involved, the costs associated with having guards to perform the monitoring 24-hours, 7-days a week would be extremely inefficient and drastically increase monthly charges. When collocators may only be on premises a relatively few hours, such monitoring would be extremely inefficient. Passive measures like cages and secured

passages are by far the most efficient and effective way of addressing the reasonable and legitimate security concerns of ILECs.

Installing such pervasive camera systems would be quite expensive. Some central offices are quite large and can be spread across several floors (SWBT's Dallas Taylor central office is approximately 200,000 square feet of equipment space spread over 8 floors); placing cameras to cover everything would be a costly and ineffective use of resources. And if real-time monitoring is required, space would have to be found for the guards (making less space available for collocation). Similarly, current computerized tracking systems may be able to identify the location of the tracking card, but not the individual who carried it in.

In any event, both alternatives fail to be sufficient for a single reason -- *neither can affirmatively prevent unauthorized access or harm to another carrier's equipment and network.* Unlike secured pathways and cages which actually physically constrain and limit the opportunity for such unauthorized access security violations, cameras and other electronic monitoring systems are observational devices that may only have a deterrent effect. Cameras or electronic equipment will not prevent someone from making a mistake, or stop someone who wishes to cause harm. Much like a camera located at an automatic teller machine, these security measures may help identify who caused the harm but only after the damage has been done.¹⁴ Merely having someone to blame and perhaps obtain recovery from is a poor solace to affected carriers and end-users alike.

¹⁴ Assuming, of course, that the data still exists. The information collected from these mediums generally overwrite data or purge themselves after a period of time.

As to the claim that U S WEST is offering "cageless" collocation, SBC is not sufficiently familiar with U S WEST's offerings to comment fully at this time. However, SBC understands that the "cageless" collocation offered by U S WEST permits the collocater to cross-connect its equipment (which may be interspersed within U S WEST's equipment racks) directly to U S WEST's frames. Such an arrangement raises greater network concerns over degradation of service and installation levels, and is impossible to manage from a security perspective. Logistically, it would be unmanageable for multiple technicians from different companies to conceivably work in the same line-ups and frames. If outages were caused with this log jam of technicians, it would be impossible to determine who or what caused the outage, how the service(s) can be restored and develop steps to prevent future service failures. It has been proven time and again during labor stoppages that trouble reports actually *decrease*. The primary reason is that there are fewer technicians working in the central offices. The potential of CLEC technicians working unrestricted along side SBC's technicians in a CO environment would significantly increase trouble rates and jeopardize SBC's ability to maintain network integrity and reliability.

The most viable, cost-effective arrangement to eliminate the cage would be to provide all CLECs, where space was available, a secured separate room or floor dedicated to the CLECs.

Another way of maintaining security without compromising the integrity and reliability of the network is to offer virtual collocation. This way, SBC will continue to maintain the equipment and the CLEC would not normally have direct access to the offices.

In sum, nothing has occurred that warrants a reversal of the Commission's earlier decisions or State commission arbitration awards. The security measures being used by ILECs have already been judged reasonable in both practice and costs by appropriate regulatory bodies, and section 706 affords no basis for weakening the longstanding policies of both the FCC and State commissions to protect the public switched network from harm.

5. The Commission Does Not Have the Requisite Authority to Dictate Pricing Structures

The Commission has also requested comment on various pricing methods and structures that could be applied to collocation arrangements. NPRM, ¶ 143. The Commission is, however, without jurisdiction over such pricing matters. As the FCC concluded earlier, collocation is a method of interconnection,¹⁵ and interconnection rates are within the exclusive jurisdiction of State commissions. As the Eighth Circuit made clear, "the Act directly and straightforwardly assigns to the states the authority to set the prices regarding the local competition provisions of the Act in subsections 252(c)(2) and 252(d)." Iowa Utilities Bd., 120 F.3d at 797. Accordingly, the Eighth Circuit vacated collocation pricing standards -- including collocation "rate structure policies" -- when it vacated the FCC's rules on pricing that were found at 47 C.F.R. Subpart F. *See, e.g.*, 47 C.F.R. §§ 51.501, 51.507, 51.509(g) ("Rate structure standards for specific elements," "Collocation") (all vacated). Id., at 819, n.39. The Commission should reject any calls to ignore the holding of Iowa Utilities Bd.

¹⁵ *See, e.g.*, Interconnection Order, ¶¶ 219, 550. Indeed, the portion of the Interconnection Order where collocation is addressed is titled "Methods of Obtaining Interconnection and Access to Unbundled Network Elements."

6. Reasonable Intervals for Collocation Have Resulted From Negotiations and Arbitrations

On the issue of intervals for provisioning collocation, SBC's experience is that these matters -- like so many others -- have been subjected to negotiations and arbitrations, with decisions rendered by State commissions based upon the record developed and State commission judgment. Those results thus considered the unique situations faced by individual ILECs, e.g., actual and projected demand, resources, local market conditions for third party services, and were tailored accordingly. There is no reason to upset those results with a uniform, nationwide, inflexible standard.

7. Collocators Play an Active Role in Determining Available Floorspace

SBC opposes the Commission's proposal to permit collocators to tour SBC LEC premises after a claim is made that space is exhausted. NPRM, ¶ 146. This opposition is grounded on maintaining network security and potential intellectual property/proprietary concerns including CPNI (e.g., special government circuits; ILEC arrangements with other customers, CLECs, and IXC's; special equipment configurations). To address this desire, SBC has already negotiated mutually-agreeable contract provisions that permit collocators the option of a premise inspection by a third-party engineer. SBC believes this is another area where negotiations and arbitrations are resulting in solutions that are often mutually agreeable, and the FCC should refrain from upsetting that process by mandating the "solution" offered by CLECs in a fashion similar to baseball arbitration.

B. Local Loop Requirements

1. The Commission Should Not Adopt National Standards For Loops.

The Commission is seeking comment on the need for additional national rules for local loops. NPRM, ¶ 154. SBC does not believe that any such rules for unbundled loop design are needed. Each provider faces a variety of conditions including present and future methods and procedures that, in aggregate, determine the most effective manner by which to provide loop requirements. National design rules would have a significant and negative effect on the efficiency of the procedures used to provision loops, while having no significant effect on the quality or capability of the unbundled loops.

What are instead needed are design rules and standards for the equipment placed on loops. Although the physical properties of the loop have a definite effect on the ability of the equipment to perform, the more substantive question is how these technologies affect other services currently being offered over those loops and/or those physically close. Having standardized specifications for each of the technologies allowed to be placed on the network would permit the management of the network's spectrum, and the not inconsiderable benefit of dispute avoidance. At a minimum, equipment should only be allowed to be placed on a loop after an adequate amount of testing has been performed to show that the equipment can be deployed without causing undue interference to existing services.

2. The Commission's Proposals for Access to Loop Information Are Unrealistic and Impractical

In ¶ 157 of the NPRM, the Commission tentatively concludes that

incumbent LECs should provide requesting competitive LECs with sufficient detailed information about the loop so that competitive LECs can make an independent determination about whether the loop is capable of supporting the xDSL equipment they intend to install. Thus, competitive LECs would need access to such information as whether the loops pass through remote concentration devices, what, if any, electronics are attached to loops, the condition and location of loops, loop length, the electrical parameters that determine the suitability of loops for various xDSL technologies, and other loop quality issues. We tentatively conclude that it is important that competitors have the ability to make their own assessments because the parameters for determining whether a loop is xDSL-compatible may differ for different technologies.

These tentative conclusion seem to be based upon beliefs that such records exist and are entirely in electronic format, and thus providing access is as "simple" as providing access to another OSS. It is simply not that simple. One essential record necessary to understand a specific loop's characteristics is the loop make-up. This information is often not available in any electronic system, and a manual look-up must be performed using the cable maps in engineering. This problem exists in all SBC LEC wire centers to some extent. The need to perform manual look-up varies greatly, anywhere from 7% to 20 % of the time for Pacific, and greater than that with SWBT. Another factor necessary to determine the loop's characteristics and possible capabilities is the amount and type of other services and circuits in the same and adjacent binders. This information is not always available in an electronic form, and finding the necessary information and summarizing it into a single "snap shot" has not been accomplished yet. SBC has no idea how to reproduce those records and make them available, much less how to keep them updated so that CLECs can have the ability that the FCC envisions.

Instead of providing a CLEC direct access to an ILEC's loop inventory, the more feasible approach would be for the CLEC to provide to the ILEC the parameters of the technology the CLEC intends to use on the loop. The ILEC would then be able to thoroughly search the terminals that feed the service location and determine whether a CLEC's request could be fulfilled and, if not, what alternatives may be available. Merely giving the CLEC direct access to LFACS (Loop Facilities Assignment and Control System) would not provide the knowledge of what is available or what rearrangements could be done to provide the service. As stated previously, LFACS does not contain the necessary information, and secure access will impact its performance by increasing the amount of transactions being submitted and hinder its ability to perform actual provisioning functions.

3. Loop Spectrum Management Is More Critical Each Day, and Needs a Standards-Driven Approach to Ensure Service Compatibility and Quality

One of the most critical issues associated with advanced services is spectrum management. Although there have been spectral issues to contend with in the past, they have been minor in comparison to those faced today with loop unbundling and the increasingly widespread deployment of xDSL technologies. The issues have been brought to the forefront by the introduction of ADSL, which uses separate frequency ranges for both the upstream and downstream transmissions that overlap those ranges used by ISDN, HDSL, T1 and other technologies already deployed in the network. In many cases, and especially when placed in the

same or adjacent binder groups or bundles, these services will interfere with each other unless properly managed.

In addressing spectrum management issues, SBC urges that a conservative approach is most appropriate for both network and consumer reasons. The Commission, State commissions, and the industry in general have had a longstanding commitment to quality of service, and the avoidance of harm to the network. The desire for competition should not outrace the ability to manage the process such that those commitments are violated. Especially when introducing a new service, adherence to those commitments are critical if consumers are to readily accept advanced services. If a new high-speed service like ADSL earns a reputation for being unreliable, the further away the objective of section 706 becomes.

For those reasons, SBC believes industry standards should be examined as a basis for technology utilization. SBC has correspondingly worked with the ANSI standards body to develop a standard for ADSL, as well as other technologies. This standard now provides an acceptable power and spectrum density ("PSD") mask under which the ADSL technology operates. Internally, PSD masks have been developed for ISDN and HDSL ("High bit rate" DSL) equipment when operated as designed and under normal network conditions. SBC is working with ANSI to develop PSD masks for the technologies that meet the challenge of minimal interference while being acceptable to the industry. Adherence to industry standards including spectrum masks is highly desirable, but it must be recognized that most PSD masks in existing standards were not designed with spectrum management in mind, and therefore are

insufficient for that purpose. Still, adherence to reasonable PSD masks, along with an inventory of services (data rates) and technology, would permit the effective spectrum management of existing and proposed services.

The introduction of new and non-standard equipment that does not conform to the PSD masks could create interference that will degrade existing or future services. While SBC agrees with the concept of a national standard for spectrum compatibility, it has several concerns regarding the organization that would establish such a standard, the process through which the standard would be developed, the participants in the development, and the time it would take to develop such standards. SBC believes that, consistent with section 706's objective, the standard must seek to maximize the number of customers that can be reached with advanced services, and not permit "first in" carriers to operate equipment in complete freedom. Until such a national standard is developed and implemented, the SBC LECs should be permitted to continue to manage their respective networks in a nondiscriminatory fashion. Again, consistent with section 706, the SBC LECs will seek to maximize the number of customers that can be reached over xDSL technologies.

Once national standards for spectrum compatibility of xDSL technologies are established, a testing and certification process could be established to identify equipment that is in compliance with the standards/PSD masks. That process could be performed by an independent third party, monitored by a consortium of network providers or ANSI, to ensure that analysis of equipment is appropriate.

On the issue of whether current uses should be grandfathered, proper spectrum management includes proactively determining what technologies are already in existence in a given portion of the network and managing the introduction of new services, by technology, so that interference is not introduced so as to cause degradation of the existing services. This management could be provided in two basic ways: (i) provide basic spectrum management using operation support systems to monitor the network and manage inward (new or added services) and outward (disconnecting services) movement to provide spectrum separation; and (ii) groom cables and binder groups to allow certain digital services to be introduced into only selected cables or binder groups. It is quite possible that either of these measures would be ineffective by itself, and that both will be required to properly administer the network. In any case, development of these systems/methods will be complicated and time-consuming, not to mention costly. In the meantime, spectrum management will remain the principal responsibility of the ILEC, the only entity in place to coordinate and enforce standards among a number of different carriers.

SBC believes that existing services should have priority if they operate with the applicable PSD mask requirements, and that new services should be allowed only when they will not degrade an existing service to an unacceptable level. In that regard, the rearrangement of existing services to permit the introduction of a new service is unacceptable. Such rearrangements cause outages, are expensive, and would introduce a state of constant churn in the network.

Regardless of the ability to generally deploy a particular technology, the ability to actually deploy that technology on any particular loop remains dependent on the nature of other services in the cable and the associated interference to and from those services. To determine the ability to deploy on a particular loop, it is necessary to know the technology being deployed, and the power level and data rate that is being provisioned. The Commission should establish rules clearly requiring a UNE-loop purchaser to provide this information whenever establishing a new service or when rearranging an existing service that uses an unbundled loop.

4. Spectrum Unbundling Would Be Contrary to Commission Decisions Is Not Technically Feasible

The Commission raises the issue of whether loop spectrum should be unbundled. The concept of spectrum unbundling would be contrary to earlier FCC decisions, and would not be "technically feasible" as defined by the FCC. Moreover, spectrum unbundling raises a host of customer issues, operational issues, potential network problems, administrative difficulties, the need to create and upgrade OSSs, and cost recovery issues. For any number of reasons, SBC opposes any mandatory spectrum unbundling.

In these Comments, SBC is using the following definition of "spectrum unbundling" and proposes its general use:

Spectrum unbundling provides the availability of spectrum, on the same copper pair, to more than one service provider, whereby each is assigned a different frequency band.

As an initial matter, spectrum unbundling would be contrary to the Interconnection Order, where the FCC concluded:

We decline to define a loop element in functional terms, rather than in terms of the facility itself. *Some parties advocate defining a loop element as merely a functional piece of a shared facility, similar to capacity purchased on a shared transport trunk.* According to these parties, this definition would enable an IXC to purchase a loop element solely for purposes of providing interexchange service. While such a definition, based on the types of traffic provided over a facility, may allow for the separation of costs for a facility dedicated to one end user, *we conclude that such treatment is inappropriate. Giving competing providers exclusive control over network facilities dedicated to particular end users provides such carriers the maximum flexibility to offer new services to such end users.* In contrast, a definition of a loop element that allows simultaneous access to the loop facility would preclude the provision of certain services in favor of others. For example, carriers wishing to provide solely voice-grade service over a loop would preclude another carrier's provision of a digital service, such as ISDN or ADSL, over that same loop. We note that these two types of services could be provided by different carriers over, for example, separate two-wire loop elements to the same end user.

Interconnection Order, ¶ 385 (italics added) (footnotes omitted). The Commission embedded this conclusion as part of an unbundling rule, 47 C.F.R. § 51.309(c), and has reiterated its effect at least once. *See, e.g., Third Order on Reconsideration and Further Notice of Proposed Rulemaking, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, 12 FCC Rcd 12460, ¶ 60 (1997) (the "requesting carrier would need to provide all services requested by the customer to whom the local loops are dedicated, and that, as a practical matter, requesting carriers usually would need to provide local exchange service over any unbundled local loops that it purchases").

Spectrum unbundling is also not technically feasible as defined by the FCC. At paragraph 203 of the Interconnection Order, the Commission stated:

We also conclude, however, that legitimate threats to network reliability and security must be considered in evaluating the technical feasibility of interconnection or access to incumbent LEC networks. Negative network reliability effects are necessarily

contrary to a finding of technical feasibility. *Each carrier must be able to retain responsibility for the management, control, and performance of its own network.* Thus, with regard to network reliability and security, to justify a refusal to provide interconnection or access at a point requested by another carrier, incumbent LECs must prove to the state commission, with clear and convincing evidence, that specific and significant adverse impacts would result from the requested interconnection or access. The reports of the Commission's Network Reliability Council discuss network reliability considerations, and establish templates that list activities that need to occur when service providers connect their networks pursuant to defined interconnection specifications or when they are attempting to define a new network interface specification. (italics added) (footnote omitted)

Spectrum unbundling will not permit the ILEC or the involved CLEC "to retain responsibility for the management, control, and performance of its own network," as delineated throughout this section.

For example, as to maintenance issues, an ILEC has the obligation to ensure that its central office switches and loop facilities support their intended network functions for the whole industry, as well as for the ILEC's retail customer. Testing and repairing a service using one set of frequencies may be impossible without affecting a service using the other set, especially if the ILEC does not exercise control over all of the services and facilities being used. The shared use of the local loop could result in multiple complaints from different parties, all arising from a problem with one carrier's service. Given the difficulty in affecting repairs in such a circumstance or even diagnosing the problem, finger pointing between carriers as to the cause of trouble would be assured. Without a clear point of demarcation between each carrier's responsibility and the ability of each to manage and control its network, it would be difficult, if not impossible, to perform testing, repair and maintenance on a timely basis, and an

administrative nightmare to assess responsibility for an out-of-service condition on a customer's shared line.

The responsibility to ensure the performance of its network and its services is of critical concern to SBC. With competition, the quality of service provided by the SBC LECs is becoming more important, not less. Given that spectrum unbundling would interfere with an ILEC's ability to operate, maintain, and repair its network, it simply is not technically feasible. The quality issue is especially important to the SBC IECs given their status as providers of universal service and carriers of last resort in their respective jurisdictions (federal and State). Further, as ILECs pervasively regulated by State commission, each must meet certain quality standards set by those Commissions. Failure to meet those requirements could result in forfeitures, fines, and customer credits or refunds. Additional liability issues might also arise under service parameters that exist in tariffs and interconnection agreements. Because the ILEC would not have complete control of its retail service due to spectrum unbundling, the ILEC's quality of service standards would not be under its control.

Following is a list of some of the other questions/problems that would be encountered with trying to provision, install, maintain, troubleshoot, and manage spectrum unbundling.

- Would different customers be allowed on the same physical loop? If so, how would lines with multiple services on one facility be identify and inventoried?
- If the customers are different, how would each be identified on the order for provisioning and maintenance records will we be able to identify? This capability does not exist today.

- Which customer would have the primary right to use of the facility – the voice or data customer?
- Whenever a voice customer calls in a service trouble report, an intrusive Mechanized Line Testing ("MLT") test is run that will affect any high-speed data riding the same physical facility. As a result, another trouble ticket from the data customer will likely be generated.
- If trouble is reported by the data customer, would the voice circuit be able to be taken down to test the data circuit? This would cause an outage on the line affecting other services or customers that may reside on the same physical loop.
- The test sets required to identify high-speed data spectrum problems are either very expensive, or do not exist. At present, no off-the-shelf test equipment exists to support a spectrum unbundling program. In addition to providing test sets for every installation/maintenance technician, every one would have to be appropriately trained.
- In the case of a trouble call from the voice customer but the facility tests good, will it be the ILEC's obligation to isolate data trouble?
- If the physical facility tests good, will the ILEC be able to bill the data service provider for the time necessary for data isolation?
- Additional dispatches and increased the work force for trouble isolation will be required to deal with multiple trouble reports, trouble caused on the voice circuit while repairing the data circuit, and vice versa.
- Would the two services be handed off on one or two network interface devices?
- There is a possible customer security problem if the voice and data customers are different on the same physical pair.

Following is a review of the items that would serve as a starting point in addressing spectrum unbundling from an OSS perspective:

- TIRKS does not have the ability to inventory or provision bandwidth. It only inventories physical pieces of equipment that have clearly defined constant segments of bandwidth (e.g., DS0, DS1, DS3). To upgrade TIRKS to inventory and assign bandwidth chunks would require a major enhancement, once the business needs and design

requirements were defined. All other OSSs would require enhancements as well. As a benchmark, roughly \$10 million dollars was SWBT's share of Bellcore development costs for TIRKS SONET software. Bellcore has estimated that total enhancement cost for all systems for SONET was \$250 million. Spectrum unbundling is at least as complicated as SONET, which has structured bandwidth segments.

- As we have seen with ADSL, technology to split bandwidth would be required at both the CO and the customer premises. If more than one customer were to be served over the loop, the splitter would be network equipment on the carrier's side of the demarcation point. Today's splitters are considered CPE, designed to go on the other side of the network interface device.
- "Splitterless" ADSL (G.Lite) is to be designed without the need for a separate splitter, and may not be viable over a shared loop.
- Currently, the SBC LECs have no system in place to track what facilities or pairs are available to support different spectral ranges. As a result, enhancements to existing systems as well as a new system to track facilities and handle Business Office requests would be required.
- Currently, the SBC LECs' OSSs for the loop do not support multiple circuit assignments to the same pair. Significant development at substantial costs would be required.

These are just the issues that SBC has been able to identify. Unquestionably there will be others raised if spectrum unbundling is further developed, and their resolution would not take place overnight.

The ADSL experience with spectrum management is instructive on the issue of spectrum unbundling. The deployment of ADSL has introduced a new element into the network that raises the incidences of interference, and hence demands spectrum be managed on a per-pair basis. Those challenges will only increase in number and severity as other forms of xDSL equipment are placed on unbundled loops. Spectrum management has proven to be daunting in itself, but

does not begin to hint at the work required to provide management of the spectrum over each individual pair. There is no basis for the reversing earlier Commission decisions on this spectrum unbundling, especially given that it is not technical feasibility under FCC rules, and is wholly impractical and not realistic given the state of technology and network administration.

At the same time, the Commission should not prohibit spectrum unbundling by any carrier so long as the ILEC does not object and no network harm results. Further, carriers engaged in such unbundling would remain fully responsible for any additional costs incurred by the ILEC supplying the loop if such unbundling results in additional work by the ILEC (*e.g.*, trouble reports, interference with other services)

5. SBC Supports Uniform Standards for Attachment of Electronic Equipment at the Central Office End of a Loop

SBC supports the FCC's tentative conclusion that "there should be uniform national standards for attachment of electronic equipment (such as modems and multiplexers) at the central office end of a loop by incumbent LECs and new entrants." NPRM, ¶ 163. While SBC is not sure that the process will result in "[a] simple set of national requirements," *see* Part 68, SBC believes that this issue is directly connected to the spectrum management issue and that national standards will be needed to ensure that the implementation of each technology minimizes out-of-band interference (and reduce disputes between carriers).